INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2004/000332

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] C12N5/06, A61K35/28, A61P31/00, A61P35/00, A61P37/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] C12N5/06. A61K35/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
JICSTPLUS, WPI(DIALOG), BIOSIS(DIALOG), PUBMED,
EMBL/DDBJ/Genebank/Geneseq

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	MARTINON-EGO C. et al., Murine Dendric Cells Derived from Myeloid Progenitors of the Thymus Are Unable to Produce Bioactive IL-12p70, J.Immunol.(2001), Vol.166, No.8, pages 5008 to 5017; page 5009, right column, lines 45 to 51; Figs. 1, 3; table 1	1-12 13-15
X Y	KELLEHER M. et al., Lipopolysaccharide Modulation of Dendritic Cells Is Insufficient to Mature Dendritic Cells to Generate CTLs from Naive Polyclonal CD8$^+$ T Cells In Vitro, Whereas CD40 Ligation Is Essential, J.Immunol.(2001), Vol.167, No.11, pages 6247 to 6255; page 6248, left column, lines 62 to 70; Figs. 1, 3, 6; table 1	1-12 13-15

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
09 February, 2004 (09.02.04)	24 February, 2004 (24.02.04)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2004)

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X/Y	GATTI E. et al., Large-Scale Culture and Selective Maturation of Human Langerhans Cells from Granulocyte Colony-Stimulating Factor-Mobilized CD34$^+$ Progenitors, J.Immunol. (2000), Vol.164, No.7, pages 3600 to 3607; page 3601, left column, lines 23 to 27; Figs. 3, 4	1-5,9,12/15
X/Y	ASKEW D. et al., CpG DNA Induces Maturation of Dendritic Cells with Distinct Effects on Nascent and Recycling MHC-II Antigen-Processing Mechanisms, J.Immunol.(2000), Vol.165, No.12, pages 6889 to 6895; page 6890, left column, lines 68 to 70; Fig. 1	1-5,9,12/15
X/Y	LIN C-L. et al., Dendritic cell chemotaxis and transendothelial migration are induced by distinct chemokines and are regulated on maturation, Eur.J.Immunol.(1998), Vol.28, No.12, pages 4114 to 4122; page 4116, right column, lines 11 to 20; Figs. 3, 4	1-5,9,12/15
X/Y	KRUG A. et al., Toll-like receptor expression reveals CpG DNA as a unique microbial stimulus for plasmacytoid dendritic cells which synergizes with CD40 ligand to induce high amounts of IL-12, Eur.J.Immunol.(2001), Vol.31, No.10, pages 3026 to 3037; Fig. 1	1-5,9,12/15
X/Y	LUTZ M B. et al., Culture of bone marrow cells in GM-CSF plus high doses of lipopolysaccharide generates exclusively immature dendritic cells which induce alloantigen-specific CD4 T cell energy in vitro, Eur.J.Immunol.(2000), Vol.30, No.4, pages 1048 to 1052; page 1049, left column, line 9 to right column, line 3; Fig. 1	1-5,9,12/15
X/Y	MEHLHOP E. et al., Enhanced in vitro stimulation of rhesus macaque dendritic cells for activation of SIV-specific T cell responses, J.Immunol. Methods(2002), Vol.260, No.1/2, pages 219 to 234; page 221, left column, lines 28 to 46; Fig. 1	1-5,9,12/15
X/Y	MANN J. et al., CD40 Induces Interleukin-6 Gene Transcription in Dendritic Cells, J.Biol.Chem. (2002), Vol.277, No.19, pages 17125 to 17138; page 17127, right column, lines 51 to 55; Fig. 1	6-8,10-12/13-14

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	TOKORO Y. et al., Molecular Cloning and Characterization of Mouse Tspan-3, a Novel Member of the Tetraspanin Superfamily, Expressed on Resting Dendritic Cells, Biochem.Biophys.Res.Commun. (2001), Vol.288, No.1, pages 178 to 183; page 179, left column, lines 18 to 20; Fig. 1	6-8,10-12 13-14
Y	Shin'ichiro MOTOHASHI et al., "NKT Men'ekikei o Mochiita Saibo Men'eki Ryoho no Rinsho eno Oyo", Experimental Medicine(2001), Vol.19, No.18, pages 2397 to 2341; Figs. 2, 5	13
Y	WO 00/66155 A1 (LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY), 09 November, 2000 (09.11.00), & AU 200046859 A & EP 1181050 A1 & JP 2002-543150 A (Claims 30 to 39)	14
Y	JP 2002-65253 A (Asahi Kasei Corp.), 05 March, 2002 (05.03.02), (Family: none) (Abstract; description, Par. Nos. [0006] to [0007])	15

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Box No. I **Nucleotide and/or amino acid sequence(s) (Continuation of item1.b of the first sheet)**

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

   a. type of material

   [x] a sequence listing

   [ ] table(s) related to the sequence listing

   b. format of material

   [ ] in written format

   [x] in computer readable form

   c. time of filing/furnishing

   [ ] contained in the international application as filed

   [x] filed together with the international application in computer readable form

   [ ] furnished subsequently to this Authority for the purposes of search

2. [x] In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.: 16 to 18
   because they relate to subject matter not required to be searched by this Authority, namely:
   The inventions as set forth in claims 16 to 18 pertain to methods for treatment of the human body by surgery or therapy and thus relates to a subject matter which this International Searching Authority is not required,
   (continued to extra sheet)

2. [ ] Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. [ ] Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

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Continuation of Box No.II-1 of continuation of first sheet(2)
under the provisions of Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.